

Executive Session

Director's Independent Design and CD-2/3A Review of the Utilities Upgrade SLI Project October 20-21, 2014

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Agenda for Exec Session

- Charge
- Typical CD-2/3A Documents
- Review Agenda
- Subcommittee Assignments
- Reviewer Writing Assignments
- Reporting Structure
- Discussion

Charge (excerpts)

- The Committee is to conduct a Director's CD-2/3a Review of the Utilities Upgrade Project (UUP) to assess if the project meets the Critical Decision 2/3a (CD-2, Approval of Performance Baseline and CD-3a, Approval to Start Construction, Phase A) requirements as specified in DOE Order 413.3B. UUP received CD-1 Approval on November 15, 2010. The project is scheduled for a DOE CD-2/3a Review on December 9-10, 2014.
- **Readiness for CD-2/3a** *The review committee shall assess the readiness of the project for CD-2/3a readiness including the completeness and self-consistency of the technical scope and final design work, cost estimate, schedule and management systems and staffing. The committee shall evaluate ... if the Project's scope of work can be accomplished within the approved Total Project Cost (TPC) by the CD-4 date. The committee is to assess if the Project team is in place ... The committee shall assess and confirm that ESH&Q has been adequately addressed.*
- **Prior Reviews** *The Committee shall assess the Project's progress on addressing the recommendations from these prior Reviews.*

Charge (paraphrased)

- The review committee should address the following specific questions in determining the Project's readiness for CD-2/3a
 - Technical – are Key Performance Parameters (KPPs) defined and on track to be met? Is design appropriately mature and documented for CD-2/3A?
 - Cost/Schedule/Funding – Is resource loaded schedule and corresponding basis of estimate documentation of sufficient quality and completeness? Is Scope, Cost, Schedule consistent with the Project Execution Plan (PEP)? Is the project ready for EVMS?
 - Management – Is an appropriate project team in place? Are required management documents complete? Is risk management employed? Is ES&H properly addressed?
 - General – is the project ready for a DOE CD-2/3a review?

Typical CD-2/3 Documents

- Acquisition Strategy
- Project Execution Plan
- Project Management Plan
- Project Organization Chart
- Final Design Requirements Established
- Technical Design Report (TDR)
- Hazards Analysis Report (HAR)
- Integrated Safety Management Plan
- Issue final National Environmental Policy Act (NEPA) determination
- Quality Assurance Plan (QAP)
- Configuration Management Plan
- Procurement Management Plan
- Established Cost and Schedule Performance Management Baseline (PMB)
- Risk Management Plan
- Risk Register & Assessment
- Resource Loaded Schedule
- Resource Profile Graphs
- Assumptions Document
- WBS Dictionary
- Milestone Dictionary
- BOEs w/reference documents
- Monthly Status Reports

Typical CD-2/3 Documents (continued)

- Scope Contingency Plan (potential adds and removals)
- Lifecycle Costs with Alternative Assessment
- Memos of Understanding (MOUs) / Statement of Work (SOWs)
- Science & Technical Requirements and Specifications

Documentation to Demonstrate EVMS Compliance

Organization

- Project WBS
- Project Organization Chart
- Responsibility Assignment Matrix (RAM) with Dollars & % LOE by CA
- Project Execution Plan & Project Management Plan
- DOE CD Approval Documents
- CA Plan – Work Authorization Docs

Planning, Scheduling, & Budgeting

- Performance Baseline Document
 - Scope – WBS Dictionary
 - Schedule – Summary & Detailed Schedule
 - Cost Baseline – Cost Plan by Fiscal Year (includes BOE, Assumptions)
- Risk Management Plan
- Risk Registry & Analysis

Documentation to Demonstrate EVMS Compliance (continued)

Accounting Considerations

- Sponsor Work Authorization (same as DOE CD approval documents)
- Finance Charge Code Mapping to WBS (may be part of RAM)

Analysis & Management Reports

- Variance Threshold Table
- Monthly Performance Reports - (3 months preferred)
- Cost Performance Reports by CA (3 months preferred)

- Variance Analysis Reports - (3 months preferred)
- EAC Analysis (Yearly, Monthly)
- Corrective Action Log

Revisions & Data Maintenance

- Baseline Change Control Log
- Baseline Approved Changes – (3 months)
- Contingency & MR Log

Committee Organization

- This is both an IDR and a CD2/3 Review
- Technical subcommittee is responsible for reviewing technical development (IDR) and resource identification (including looking at representative BOEs), and assessing the extent of final designs
 - From a practical perspective I would suggest we regard a design as final when it can be used as a basis for proceeding to spend funds in an efficient manner.
- Cost & Schedule Subcommittee will do both drill downs and an assessment of process and documentation of cost/schedule
 - Need to look at risk associated with elements not yet at final design
- Management Subcommittee will assess the state of all CD2/3a documentation
- ES&H Subcommittee will review hazards/impacts and associated documentation

Review Philosophy

- Q: Is the spirit of this review to assess whether what is proposed will work from a technical perspective, or whether it can be executed successfully as a project?
- A: Yes & yes

Agenda Summary - Monday

- Monday morning – plenary sessions in Curia II
- Lunch – WH 2nd floor crossover
- Monday 1-3pm – plenary continued in Comitium
- Monday 3:15-5pm – breakouts
 - Session 1: Management, Cost & Schedule – Snake Pit (WH2NE)
 - Session 2: ES&H –Theory (WH3NW)
 - Session 3: Technical (Industrial Cooling Water & High Voltage) – Racetrack (WH7XO)
- Monday 5-6pm - Executive Session – Snake Pit (WH2NE)

Agenda Summary - Tuesday

- Tuesday 8am-noon – Answers to Homework Questions (if any), report writing, and dry run – Snake Pit (WH2NE)
- Closeout Presentation noon-1pm – Racetrack (WH7XO)

NOTE: Write-ups (including answers to charge questions) are to be sent to Lisa Temple at ltemple@fnal.gov prior to 9:30 AM on Tuesday for the Closeout Dry Run starting at 10:00 AM. Also try to find time to review your impressions with the project team prior to the closeout for fact checking.

Reviewer Subcommittee Breakout Assignments

Breakout Sessions	Reviewers
1. Project Management, Cost & Schedule – Snake Pit (WH2NE)	Jason Budd Tracy Lundin Sherese Humphrey Bob O’Sullivan
2. ES&H - Theory (WH3NW)	Mike Andrews
3. Technical (Industrial Cooling & High Voltage) – Racetrack (WH7XO)	Jeff Sims Jerry Leibfritz Steven Hays John Reid

*Cost/Schedule and ESH&Q Reviewers will rotate between breakouts

Reviewer Writing Assignments

<u>1.0 Introduction</u>	
2.0 Management	<u>Jason Budd</u> *
Cost & Schedule	Tracy Lundin
	<u>Sherese Humphrey</u> *
	Bob O'Sullivan
3.0 Technical	
3.1 Industrial Cooling Water	<u>Jeff Sims</u> *
3.2 High Voltage	Jerry Leibfritz
	Steven Hays
	John Reid
4.0 ES&H	<u>Mike Andrews</u> *

Note: * Indicates Subcommittee Lead and integrator of write-ups
Underlined names are the primary writer.

Reviewer Writing Assignments (continued)

TECHNICAL	
1. Are all Key Performance Parameters (KPPs) sufficiently defined and documented to establish the project performance baseline? Are preliminary designs for all project scope, final design for Phase-A scope, and the respective design review reports complete? Similarly, is the CD-3a scope towards achieving the KPP's sufficiently defined and documented?	<u>Jeff Sims</u> Jerry Leibfritz Steven Hays John Reid All
2. Is the Project's design appropriately developed and documented in the UUP Technical Design Report (TDR)? Is the final design sufficiently mature such that the Project can initiate procurements and start construction? What outstanding design risks remain? For those elements of the design that are not yet finalized, has the Project shown that there are no major risks or issues that impede a clear path to a final design?	<u>Jerry Leibfritz</u> Jeff Sims Steven Hays John Reid All
COST/SCHEDULE/FUNDING	
3. Has the Project developed a resource-loaded schedule that includes the Project's full scope of work? Is the schedule realistic and achievable?	<u>Sherese Humphrey</u> Bob O'Sullivan All
4. Are the cost and schedule estimates complete and credible? Do they include adequate scope, cost and schedule contingency?	<u>Bob O'Sullivan</u> Sherese Humphrey All
5. Has the Project documented the Basis of Estimate (BOE) that supports the baseline cost and schedule presented?	<u>Bob O'Sullivan</u> Sherese Humphrey All
6. Are the project cost and scope consistent with the draft Project Execution Plan and preliminary performance baseline? Has the schedule been appropriately updated? Is adequate cost, schedule and scope contingency identified to mitigate risk prior to and after CD-3a? Is an Earned Value Management System employed and ready to begin monthly PARS-II reporting in a timely manner?	<u>Sherese Humphrey</u> Bob O'Sullivan All

Note: * Indicates Subcommittee Lead and integrator of write-ups

Underlined names are the primary writer.

Reviewer Writing Assignments (continued)

7. Has the Project implemented Risk Management by identifying risks, performing a risk assessment (qualitative and quantitative) and developing mitigation plans? Are there any interdependencies with other projects or significant research operations? If so, have they been identified and are there plans in place to mitigate risk for the CD-3a scope?	<u>Tracy Lundin</u> Jason Budd All
8. Is CD-4 achievable with the Project's risks and within the DOE approved Total Project Cost?	<u>Jason Budd</u> Tracy Lundin All
9. Has the Project updated required project management documents per DOE Order 413.3B for CD-2/3 and per the Fermilab Project Management System? Are the solicitation documents accurate and sufficiently mature to support the procurement and/or construction of the Phase A scope under CD-3A? Are the Acquisition Strategy and Acquisition Plan updated and approved? Are cost estimates reconciled and bids or quotes in-hand?	<u>Jason Budd</u> Tracy Lundin All
10. Are the Project organization and staffing levels adequate to initiate construction and manage the work to achieve CD-4?	<u>Tracy Lundin</u> Jason Budd All
11. Are ESH&Q aspects being properly addressed at this stage? Are the Hazard Analysis Report and the final NEPA determination issued and are the permits in place to allow CD-3a scope to commence?	<u>Mike Andrews</u> All
12. Does the Project's process for monthly progress reporting satisfy DOE and Laboratory requirements?	<u>Bob O'Sullivan</u> All
13. Has the Project appropriately addressed the recommendations from prior reviews?	<u>Tracy Lundin</u> All
14. Is the UUP Project ready for a DOE CD-2/3a review in December?	<u>Jason Budd</u> All

Note: * Indicates Subcommittee Lead and integrator of write-ups
Underlined names are the primary writer.

Reporting Structure

- Results of the review are to be documented as findings, comments, and recommendations.
- The answers to the charge questions are to include feedback from each subcommittee.
- Any additional actions required to be completed by the project team to acceptably address the review charge are to be documented as Recommendations.
- Findings, Comments, Recommendations and answers to the questions are to be presented in writing at a closeout with project team and Fermilab's management.

Findings, Comments, and Recommendations

- Findings
 - Findings are statements of fact that summarize noteworthy information presented during the review.
- Comments
 - Comments are judgment statements about the facts presented during the review. The reviewers' comments are based on their experiences and expertise.
 - The comments are to be evaluated by the project team and actions taken as deemed appropriate.
- Recommendations
 - Recommendations are statements of actions that should be addressed by the project team.
 - A response to the recommendation is expected and that the actions taken would be reported on during future reviews.

Reviewer Write-ups

- Write-up Closeout Template is posted on Director's Review Webpage.
- Write-ups (including answers to charge questions) are to be sent to Lisa Temple at ltemple@fnal.gov prior to 9:30 AM on Tuesday, Oct 21 for the Closeout Dry Run starting at 10:00 AM. A final report will be issued within 2 weeks after the closeout.

Discussion

- Questions?